

with power over what to label, and ends in power over everything that is or is not labeled.

Step 4: argue that since consumer electronics are to be regulated, regulation of cable services is unnecessary and unintended.

By assuming that the entire compatibility problem is one of consumer information and hence consumer products, and proposing that it can be solved by regulating all hardware sold to consumers, the argument concludes that the "compatibility" problem has been solved, so no regulation of cable services is necessary.

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Aside from its circular assumptions, the main problem with the cable industry's argument is that it misconstrues the reason for, and importance of, "cable ready" labeling. The point of labeling is to facilitate, rather than restrict, consumer choice. Thus, the objective of labeling ought to be to avoid, rather than invite or compel, substantive regulation of consumer choice.

Defining and labeling equipment as "cable ready" makes sense only if there are standards binding on the cable industry. Without such standards, a manufacturer selling a set as "cable ready" is shooting at a moving target. And without a standard that delivers true compatibility, the manufacturer applying the "cable ready" tag is misleading consumers, even if it is complying with the law.

The argument for product regulation, rather than mere labeling, is based on the assumption that consumers are incapable of making informed choices based on labels alone. If one agrees that there should never be any national standards for cable television, then the cable industry may be sadly correct that an informed consumer choice is impossible. The answer, however, is not to infer regulatory authority where none is intended or conveyed. The answer, rather, is to establish a standard and, as Congress intended, let consumers choose.

B. MECA Opposes Any Multiport Approach As
Obsolete, Destructive of Signal Quality, and
Costly

Even the cable industry filings recognize that the original Multiport design is obsolete. MECA opposes the reliance on Multiport, or any port, as destructive of quality and ultimately costly to the consumer.^{5/}

In discussing suggestions with respect to ports or

turning, it is sometimes assumed that one segment of a

expensive. Essentially, such an approach would unravel the component and product integration economies that, over the years, have allowed real prices of color televisions to decline dramatically, as performance and quality have improved.

1. Operation through a port is likely to degrade performance and cause consumer frustration

A Multiport or IF port arrangement is invasive to the

for the specifications and operation of every key circuit that affects the integral performance of its products.

2. Any port approach guarantees, rather than eliminates, redundancy

MECA opposes port approaches, as well, because they guarantee redundancy and additional expense. The key IF circuitry, discussed above, has to be replicated in both the receiver and the "descrambler" box. And a single-signal box, by itself, does not restore the compatibility features -- taping one channel while watching another, picture-in-picture -- whose discussion triggered this proceeding in the first place. To restore these features, it will be necessary to have two boxes, plus sophisticated switching operations, for every TV/VCR location, plus an additional box for every additional TV in the house. A family with 3 TVs and one VCR (not uncommon) would thus need four descrambler boxes, three ported TVs, and a ported VCR to approximate the level of compatibility that most enjoy, today, without any converter boxes.

3. Ports and ancillary circuitry modifications impose very significant additional costs

In addition to the cost of every descrambler box, the additional cost of adding a Multiport or IF port to each TV and VCR would be significant. Factoring in the cost of other circuit changes advocated by the cable industry comments, the annual cost to consumers of a Multiport approach -- extra

descrambler boxes, circuit changes, and ports -- could be huge. Yet neither compatibility nor TV or VCR performance would be assured for the long term.

4. A massive consumer electronics investment in any new port may, again, be obsoleted in a digital environment

Even as the cable industry now proposes a return to Multiport, the preconditions are at hand for it to die again from lack of cable support. For it is not clear that the industry means to support Multiport, or any port, in a digital environment.

The cable industry proposal is that TV and VCR manufacturers be regulated, at least to the extent that the term "cable ready" could be used only if the product were equipped with the prescribed port. Yet, if the port could not function with new digitally compressed signals, the product would no longer be "cable ready" for all purposes. The cable industry suggestion would have created precisely the situation that, the industry says, it deplores today. And ported TVs and VCRs would, again, be obsolete.

The answer, of course, is for the Commission to require a multi-set, multi-signal security approach, and preside over digital standards for frequencies, picture coding, compression, modulation, and multiplexing. Under such circumstances, a port approach, though expensive, would do little harm -- but there would then be not the slightest necessity or justification for it.

C. Replaceable Tuners Would Further Unravel the Performance and Cost-Efficiency of TV and VCR Designs

Another cable industry suggestion is that, to conform to local cable practice, or keep up with cable industry changes, TV and VCR tuners ought to be modular, or replaceable. Following this suggestion would further destroy the manufacturing and component integration that have made TVs and VCRs such bargains for consumers.

In modern TVs, tuner control is integrated into a tuning system. Replacing the tuner function, itself, accomplishes nothing unless the replacement is subject to system control. This control typically is achieved by a microprocessor that controls functions such as consumer adjustments (e.g., brightness and tint) and on-screen displays, as well as tuner addressability. Making the tuner modular would require divorcing the tuner microprocessor control from all other control. This would add significant cost. Essentially, the component and functional integration that has boosted reliability and held down prices would be reversed.

Designing electronic elements of TVs to be consumer-replaceable is impractical, as well as expensive. The universe of consumers who can replace PC boards is extremely limited, compared to the universe of TV customers. Moreover, TVs include much higher voltages than PCs.^{6/} The built-in tuner "addressing" system would not be changeable. It would,

^{6/} Anything over 28 volts is considered hazardous by the Underwriters Laboratories.

therefore, be necessary for the designer of that system to have some knowledge of the circuitry of the next generation tuner. By definition, this is unlikely, unless tuners are to be replaced to conform only to marginal changes in cable systems.

As in the case of ported products, the ultimate hardware performance of the product would not be the responsibility of any one seller. Yet, as opposed to cable services, which are only rented, the consumer would be asked to buy products the ultimate performance, or even specifications, of which the seller cannot guarantee.

D. Definitions and Labels Should Not Be Used to Hide Imposition of Uneconomic Systems on the Public

It might be argued that, even if Multiport or replaceable tuners cannot be mandated, they might be specified nevertheless and considered "optional" for manufacturers. In MECA's view, resorting to labels or assurances of optionality does not make an uneconomic system economical, or assure compatibility where none will be achieved. Nor does it enhance the ability of consumers to make an informed choice.

1. "Multiport's" disadvantages persist whether it is labeled "mandatory" or "optional"

MECA has urged that the Commission examine the overall costs to consumers of decisions with respect to signal security and encryption. In assessing the costs of a system

that would rely on optional half measures, such as "Multiport," the Commission should review the economic factors affecting decisions of major participants: consumers, electronics manufacturers, and cable companies.

Consumers want compatibility and convenience. They want to receive cable signals on every TV in the house, as well as on their VCR. They don't like converter boxes, and particularly will not like having to switch between a host of

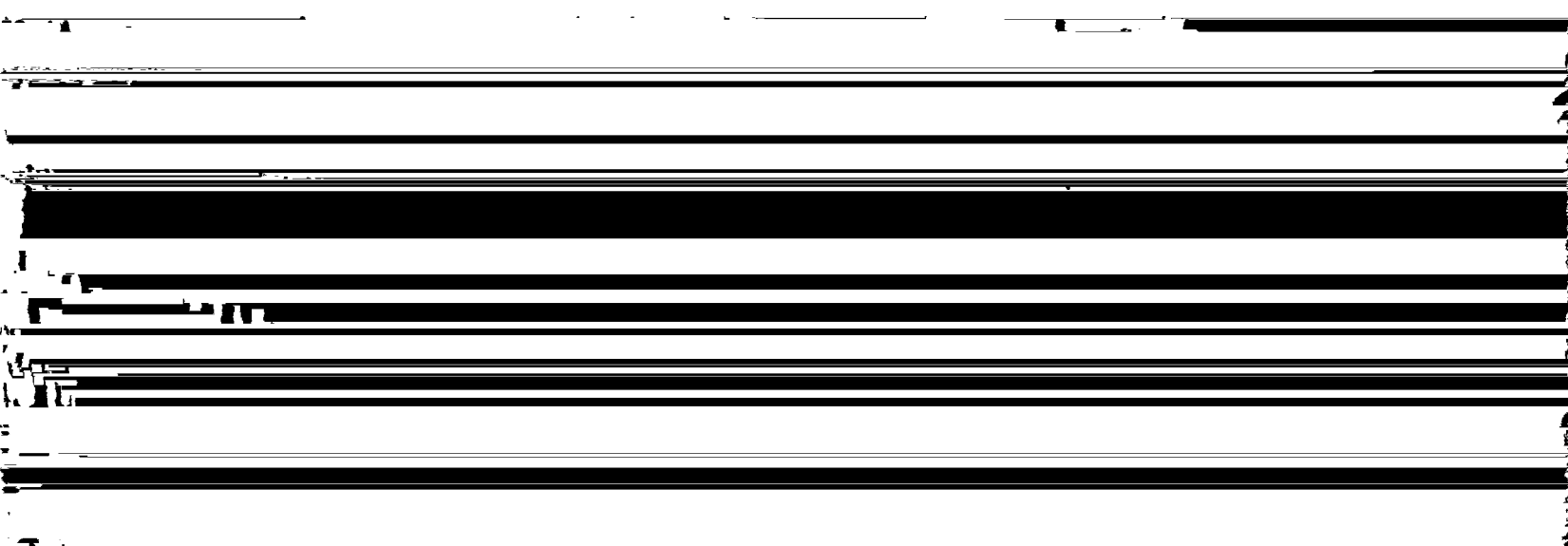
monopolies. they are intent on preserving their freedom to

what seems mandatory for local cable systems may, in reality, be optional, so long as cable controls the consumer interface and does not have to respond to direct competition.

Consumers, ultimately, receive the benefits of competition yet pay for its consequences. They are best served if they know the consequences of their electronics purchasing decisions, and can avoid redundancy. They are worst served, and most rebellious, if they buy electronics features they cannot use, but must accept cable devices they do not want. If a port system is identified as the only "answer" to compatibility, it matters little whether it is labeled "optional" or "mandatory," because the costs, economics, and consumer uncertainties will be the same.

V. CONSUMERS WILL BEST BE SERVED BY POINT-OF-ENTRY SECURITY, A DIGITAL TRANSMISSION STANDARD, AND OPEN MARKET COMPETITION IN PROVIDING RECEPTION APPARATUS

The interim compatibility measures proposed in the cable industry filings share a common flaw: they can




box. The costs of overcoming this obstacle, to any significant extent, are huge and widely spread. By comparison, after all of these costs are considered, security technology that allows the simultaneous receipt and processing of all authorized signals by consumer TVs and VCRs must be a bargain.

Perhaps the most significant cost of wedding consumers forever to cable-system-provided, single-set, single-channel addressable descrambler boxes is the loss of competition such a decision would entail. By insisting on performing descrambling at every set top, through only the cable system's own equipment, the cable industry would deny the benefits of competition to every consumer.

MECA believes that the day of the functionally integrated television and VCR is far from over. The design, component, and manufacturing efficiencies achieved through integration play too large a role in the consumer electronics industry's ability to supply sets to virtually every household at reasonable prices. But even when, and if, integration is no longer possible -- as in the supply of digital converters for present TV sets -- competition is. There is a fundamental consumer benefit from competition in the supply of electronic devices to consumers. There is a fundamental cost -- on top of all the others identified in these comments -- in denying competition.

Respectfully submitted,

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